SAINT PAUL REGIONAL WATER SERVICES

PHYSICAL AND CHEMICAL ANALYSIS OF WATER

Jan-09

All results are in parts per million & Samples Measured are Dissolved Ions

PHYSICAL WATER QUALITY

	Detection Limit	EFFLUENT
Color (Color Units)		3
Loss Ignition (ppm)		95
Non-Volatile Salts (ppm)		97
Temperature (^{0}C)		5
Total Dissolved Solids (ppm)		192
Turbidity (NTU)		0.042

CHEMICAL WATER QUALITY

	Detection Limit	EFFLUENT
Alkalinity-Total (ppm as $CaCO_3$)		65
Carbonate Hardness (ppm as $CaCO_3$)		65
Dissolved Oxygen (ppm)		8.9
Hydrogen Ion-pH		9.09
Non-Carbonate Hardness (ppm)		54
Total Hardness (ppm as $CaCO_3$)-EDTA method		119
Total Organic Carbon (ppm as C)		4.16

Total Hardness (grains/Gal as $CaCO_3$)-EDTA method is 6.96 grains/Gal

CHEMICAL WATER QUALITY - INORGANIC NONMETALS

	Detection Limit	EFFLUENT
Ammonia Nitrogen (ppm as N)	0.010	0.647
Chloride-Cl (ppm as Cl^{-1})		40
Chlorine Residual (ppm Cl as Cl_2)		2.90
Fluoride-F (ppm as F^{-1})		1.22
Nitrate, Nitrite Nitrogen (ppm as N)	0.002	0.495
Sulfur-S (ppm as S)		8.7
Total Phosphorus-P (ppm as P)	0.001	0.012

CHEMICAL WATER QUALITY - METALS

	Detection Limit	EFFLUENT
Aluminum-Al (ppm as Al)	0.001	<0.001
Arsenic-As (ppm as As)	0.001	0.004
Cadmium-Cd (ppm as Cd)	0.0001	<0.0001
Calcium-Ca (ppm as Ca)		34
Copper-Cu (ppm as Cu)	0.013	<0.013
Iron-Fe (ppm as Fe)	0.050	<0.050
Lead-Pb (ppm as Pb)	0.0004	<0.0004
Magnesium-Mg (ppm as Mg)		8
Manganese-Mn (ppm as Mn)	0.020	<0.020
Silicon-Si (ppm as Si)	2.00	3.37
Sodium-Na (ppm as Na)	1.0	18.6
Tin-Sn (ppm as Sn)	0.010	0.049
Zinc-Zn (ppm as Zn)	0.010	0.016